

SEQUENCE LISTING

<110> Godbole, Shubhada D
Kuo, Chiaoyun
Arterburn, Matthew C
Yeung, George
Palencia, Servando
Tang, Y. Tom
Liu, Chenghua
Drmanac, Radoje T

<120> METHODS AND MATERIALS RELATING TO CADHERIN-LIKE POLYPEPTIDES AND POLYNUCLEOTIDES

<130> HYS-39

<140> Not yet assigned

<141> 2001-02-16

<150> US 09/560,875

<151> 2000-04-27

<150> US 09/496,914

<151> 2000-02-03

<160> 17

<170> PatentIn version 3.0

<210> 1

<211> 417

<212> DNA

<213> Homo sapiens

<220>

<221> misc_feature

<222> (1)..(417)

<223> n = A, T, G, or C

<400> 1

```
agagcctata ccagttctcc gtggtggaga cagctggacc tggcacactg gtgggccggc      60
tccggggcca ggacccagac ctggggggaca acgccctgat ggcatacagc atcctggatg      120
gggagggggtc tgaggccttc agcatcagca cagacttgca gggtcgagac gggctcctca      180
ctgtccgcaa gcccctagac tttagagagc agcgctccta ctccttcctg gtcgaggcca      240
ccaacacgct cattgaccca gcctatctgc ggcgagggcc cttcaaggat gtggcctctg      300
tgcgtgtggc agtgcaagat gccccagagc cacctgcctt caccagggct gcctaccacc      360
tgacagtgcc tgagaacaag gccccggnga ccctggtagg ccagatctcc gcggctg         417
```

<210> 2

<211> 582
 <212> DNA
 <213> Homo sapiens

 <400> 2
 agagcctata ccagttctcc gtggtggaga cagctggacc tggcacactg gtgggccggc 60
 tccgggcccc ggacccagac ctggggggaca acgccctgat ggcatacagc atcctggatg 120
 gggagggggtc tgaggccttc agcatcagca cagacttgca gggtcgagac gggctcctca 180
 ctgtccgcaa gccctagac tttgagagcc agcgtccta ctcttccgt gtcgaggcca 240
 ccaacacgct cattgaccca gcctatctgc ggcgagggcc cttcaaggat gtggcctctg 300
 tgcgtgtggc agtgcaagat gccccagagc cacctgcctt caccaggt gcctaccacc 360
 tgacagtgcc tgagaacaag gccccgggga ccctggtagg ccagatctcc gcggctgacc 420
 tggactcccc tgccagcca atcagatact ccactctccc cactcagat ccggagcggt 480
 gcttctctat ccagcccagag gaaggcacca tccatacagc agcaccctg gatcgcgagg 540
 ctgcgcctg gcacaacctc actgtgctgg ctacagagct cg 582

<210> 3
 <211> 2206
 <212> DNA
 <213> Homo sapiens

<220>
 <221> CDS
 <222> (178)..(2088)

<400> 3
 aattcagcgg ccgctgaatt ctagcgccgg cctgggcccc tcggcagtgc caggtgtgga 60
 tccatgggggt agcctcaacg catctgcccc tccaccccag ccagctcatg ggccacgtgg 120
 cctggcccag cctcagcacc cagggccagt gaacagagcc ctggctggag tccaaac 177
 atg tgg ggc ctg gtg agg ctc ctg ctg gcc tgg ctg ggt ggc tgg ggc 225
 Met Trp Gly Leu Val Arg Leu Leu Leu Ala Trp Leu Gly Gly Trp Gly
 1 5 10 15
 tgc atg ggg cgt ctg gca gcc cca gcc cgg gcc tgg gca ggg tcc cgg 273
 Cys Met Gly Arg Leu Ala Ala Pro Ala Arg Ala Trp Ala Gly Ser Arg
 20 25 30
 gaa cac cca ggg cct gct ctg ctg cgg act cga agg agc tgg gtc tgg 321
 Glu His Pro Gly Pro Ala Leu Leu Arg Thr Arg Arg Ser Trp Val Trp
 35 40 45
 aac cag ttc ttt gtc att gag gaa tat gct ggt cca gag cct gtt ctc 369
 Asn Gln Phe Phe Val Ile Glu Glu Tyr Ala Gly Pro Glu Pro Val Leu
 50 55 60

att ggc aag ctg cac tcg gat gtt gac cgg gga gag ggc cgc acc aag Ile Gly Lys Leu His Ser Asp Val Asp Arg Gly Glu Gly Arg Thr Lys 65 70 75 80	417
tac ctg ttg acc ggg gag ggg gca ggc acc gta ttt gtg att gat gag Tyr Leu Leu Thr Gly Glu Gly Ala Gly Thr Val Phe Val Ile Asp Glu 85 90 95	465
gcc aca ggc aat att cat gtt acc aag agc ctt gac cgg gag gaa aag Ala Thr Gly Asn Ile His Val Thr Lys Ser Leu Asp Arg Glu Glu Lys 100 105 110	513
gcg caa tat gtg cta ctg gcc caa gcc gtg gac cga gcc tcc aac cgg Ala Gln Tyr Val Leu Leu Ala Gln Ala Val Asp Arg Ala Ser Asn Arg 115 120 125	561
ccc ctg gag ccc cca tca gag ttc atc atc aaa ggg caa gac atc aac Pro Leu Glu Pro Pro Ser Glu Phe Ile Ile Lys Gly Gln Asp Ile Asn 130 135 140	609
gac aat cca ccc att ttt ccc ctt ggg ccc tac cat gcc acc gtg ccc Asp Asn Pro Pro Ile Phe Pro Leu Gly Pro Tyr His Ala Thr Val Pro 145 150 155 160	657
gag atg tcc aat gtc ggg aca tca gtg atc cag gtg act gct cac gat Glu Met Ser Asn Val Gly Thr Ser Val Ile Gln Val Thr Ala His Asp 165 170 175	705
gct gat gac ccc agc tat ggg aac agt gcc aag ctg gtg tac act gtt Ala Asp Asp Pro Ser Tyr Gly Asn Ser Ala Lys Leu Val Tyr Thr Val 180 185 190	753
ctg gat gga ctg cct ttc ttc tct gtg gac ccc cag act gga gtg gtg Leu Asp Gly Leu Pro Phe Phe Ser Val Asp Pro Gln Thr Gly Val Val 195 200 205	801
cgt aca gcc atc ccc aac atg gac cgg gag aca cag gag gag ttc ttg Arg Thr Ala Ile Pro Asn Met Asp Arg Glu Thr Gln Glu Glu Phe Leu 210 215 220	849
gtg gtg atc cag gcc aag gac atg ggc ggc cac atg ggg ggg ctg tca Val Val Ile Gln Ala Lys Asp Met Gly Gly His Met Gly Gly Leu Ser 225 230 235 240	897
ggc agc act acg gtg act gtc acg ctc agc gat gtc aac gac aac ccc Gly Ser Thr Thr Val Thr Val Thr Leu Ser Asp Val Asn Asp Asn Pro 245 250 255	945
ccc aag ttc cca cag agc cta tac cag ttc tcc gtg gtg gag aca gct Pro Lys Phe Pro Gln Ser Leu Tyr Gln Phe Ser Val Val Glu Thr Ala 260 265 270	993
gga cct ggc aca ctg gtg ggc cgg ctc cgg gcc cag gac cca gac ctg Gly Pro Gly Thr Leu Val Gly Arg Leu Arg Ala Gln Asp Pro Asp Leu 275 280 285	1041

ggg gac aac gcc ctg atg gca tac agc atc ctg gat ggg gag ggg tct Gly Asp Asn Ala Leu Met Ala Tyr Ser Ile Leu Asp Gly Glu Gly Ser 290 295 300	1089
gag gcc ttc agc atc agc aca gac ttg cag ggt cga gac ggg ctc ctc Glu Ala Phe Ser Ile Ser Thr Asp Leu Gln Gly Arg Asp Gly Leu Leu 305 310 315 320	1137
act gtc cgc aag ccc cta gac ttt gag agc cag cgc tcc tac tcc ttc Thr Val Arg Lys Pro Leu Asp Phe Glu Ser Gln Arg Ser Tyr Ser Phe 325 330 335	1185
cgt gtc gag gcc acc aac acg ctc att gac cca gcc tat ctg cgg cga Arg Val Glu Ala Thr Asn Thr Leu Ile Asp Pro Ala Tyr Leu Arg Arg 340 345 350	1233
ggg ccc ttc aag gat gtg gcc tct gtg cgt gtg gca gtg caa gat gcc Gly Pro Phe Lys Asp Val Ala Ser Val Arg Val Ala Val Gln Asp Ala 355 360 365	1281
cca gag cca cct gcc ttc acc cag gct gcc tac cac ctg aca gtg cct Pro Glu Pro Pro Ala Phe Thr Gln Ala Ala Tyr His Leu Thr Val Pro 370 375 380	1329
gag aac aag gcc ccg ggg acc ctg gta ggc cag atc tcc gcg gct gac Glu Asn Lys Ala Pro Gly Thr Leu Val Gly Gln Ile Ser Ala Ala Asp 385 390 395 400	1377
ctg gac tcc cct gcc agc cca atc aga tac tcc atc ctc ccc cac tca Leu Asp Ser Pro Ala Ser Pro Ile Arg Tyr Ser Ile Leu Pro His Ser 405 410 415	1425
gat ccg gag cgt tgc ttc tct atc cag ccc gag gaa ggc acc atc cat Asp Pro Glu Arg Cys Phe Ser Ile Gln Pro Glu Glu Gly Thr Ile His 420 425 430	1473
aca gca gca ccc ctg gat cgc gag gct cgc gcc tgg cac aac ctc act Thr Ala Ala Pro Leu Asp Arg Glu Ala Arg Ala Trp His Asn Leu Thr 435 440 445	1521
gtg ctg gct aca gag ctc ggc tgg agc tgg ggg cca gaa agg ggc tgg Val Leu Ala Thr Glu Leu Gly Trp Ser Trp Gly Pro Glu Arg Gly Trp 450 455 460	1569
gta cct ctt ctg gtt gct gag tgg agt gca cca gca gcc cca ccc cag Val Pro Leu Leu Val Ala Glu Trp Ser Ala Pro Ala Ala Pro Pro Gln 465 470 475 480	1617
aga agc cct gtt gga agc gct gtg gga atc ccc caa gac agt tct gca Arg Ser Pro Val Gly Ser Ala Val Gly Ile Pro Gln Asp Ser Ser Ala 485 490 495	1665
cag gcc tcg cgc gtg caa gtg gcc atc cag acc ctg gat gag aat gac Gln Ala Ser Arg Val Gln Val Ala Ile Gln Thr Leu Asp Glu Asn Asp 500 505 510	1713
aat gct ccc cag ctg gct gag ccc tac gat act ttt gtg tgt gac tct	1761

Asn	Ala	Pro	Gln	Leu	Ala	Glu	Pro	Tyr	Asp	Thr	Phe	Val	Cys	Asp	Ser		
	515						520					525					
gca	gct	cct	ggc	cag	ctg	att	cag	gtc	atc	cgg	gcc	ctg	gac	aga	gat	1809	
Ala	Ala	Pro	Gly	Gln	Leu	Ile	Gln	Val	Ile	Arg	Ala	Leu	Asp	Arg	Asp		
	530					535					540						
gaa	gtt	ggc	aac	agt	agc	cat	gtc	tcc	ttt	caa	ggt	cct	ctg	ggc	cct	1857	
Glu	Val	Gly	Asn	Ser	Ser	His	Val	Ser	Phe	Gln	Gly	Pro	Leu	Gly	Pro		
	545				550				555						560		
gat	gcc	aac	ttt	act	gtc	cag	gac	aac	cga	gac	ctg	cct	gca	tgg	ttc	1905	
Asp	Ala	Asn	Phe	Thr	Val	Gln	Asp	Asn	Arg	Asp	Leu	Pro	Ala	Trp	Phe		
				565					570						575		
cat	cca	tta	ctc	atg	gcc	tca	gcc	tca	tcc	tgg	ctc	cac	tgg	cct	cca	1953	
His	Pro	Leu	Leu	Met	Ala	Ser	Ala	Ser	Ser	Trp	Leu	His	Trp	Pro	Pro		
			580					585					590				
gct	gag	aga	ggg	aac	cag	cct	gcc	tcc	cag	ggc	aag	agc	tcc	agc	ctc	2001	
Ala	Glu	Arg	Gly	Asn	Gln	Pro	Ala	Ser	Gln	Gly	Lys	Ser	Ser	Ser	Leu		
		595				600					605						
ccg	tgt	ggc	cgc	ctc	cct	gga	gct	ctg	ccc	agc	tgt	cag	ctt	ccc	ctg	2049	
Pro	Cys	Gly	Arg	Leu	Pro	Gly	Ala	Leu	Pro	Ser	Cys	Gln	Leu	Pro	Leu		
	610					615					620						
ggc	atc	cca	gcc	ctg	ggc	att	gtc	ttg	tgt	gct	tcc	tga	ggg	agtaggg		2098	
Gly	Ile	Pro	Ala	Leu	Gly	Ile	Val	Leu	Cys	Ala	Ser						
	625				630				635								
aaaggaaagg	gggagggcggc	tggggaagg	gaaagaggga	ggaaggggag	gggcctccat											2158	
ctctaatttc	ataataaaca	aacactttat	tttgtaaaaa	aaaaaaaa												2206	

<210> 4
 <211> 636
 <212> PRT
 <213> Homo sapiens

<400> 4

Met	Trp	Gly	Leu	Val	Arg	Leu	Leu	Leu	Ala	Trp	Leu	Gly	Gly	Trp	Gly
1			5						10					15	

Cys	Met	Gly	Arg	Leu	Ala	Ala	Pro	Ala	Arg	Ala	Trp	Ala	Gly	Ser	Arg
			20					25					30		

Glu	His	Pro	Gly	Pro	Ala	Leu	Leu	Arg	Thr	Arg	Arg	Ser	Trp	Val	Trp
	35					40						45			

Asn	Gln	Phe	Phe	Val	Ile	Glu	Glu	Tyr	Ala	Gly	Pro	Glu	Pro	Val	Leu
	50					55					60				

Ile Gly Lys Leu His Ser Asp Val Asp Arg Gly Glu Gly Arg Thr Lys
65 70 75 80

Tyr Leu Leu Thr Gly Glu Gly Ala Gly Thr Val Phe Val Ile Asp Glu
85 90 95

Ala Thr Gly Asn Ile His Val Thr Lys Ser Leu Asp Arg Glu Glu Lys
100 105 110

Ala Gln Tyr Val Leu Leu Ala Gln Ala Val Asp Arg Ala Ser Asn Arg
115 120 125

Pro Leu Glu Pro Pro Ser Glu Phe Ile Ile Lys Gly Gln Asp Ile Asn
130 135 140

Asp Asn Pro Pro Ile Phe Pro Leu Gly Pro Tyr His Ala Thr Val Pro
145 150 155 160

Glu Met Ser Asn Val Gly Thr Ser Val Ile Gln Val Thr Ala His Asp
165 170 175

Ala Asp Asp Pro Ser Tyr Gly Asn Ser Ala Lys Leu Val Tyr Thr Val
180 185 190

Leu Asp Gly Leu Pro Phe Phe Ser Val Asp Pro Gln Thr Gly Val Val
195 200 205

Arg Thr Ala Ile Pro Asn Met Asp Arg Glu Thr Gln Glu Glu Phe Leu
210 215 220

Val Val Ile Gln Ala Lys Asp Met Gly Gly His Met Gly Gly Leu Ser
225 230 235 240

Gly Ser Thr Thr Val Thr Val Thr Leu Ser Asp Val Asn Asp Asn Pro
245 250 255

Pro Lys Phe Pro Gln Ser Leu Tyr Gln Phe Ser Val Val Glu Thr Ala
260 265 270

Gly Pro Gly Thr Leu Val Gly Arg Leu Arg Ala Gln Asp Pro Asp Leu
275 280 285

Gly Asp Asn Ala Leu Met Ala Tyr Ser Ile Leu Asp Gly Glu Gly Ser
 290 295 300

Glu Ala Phe Ser Ile Ser Thr Asp Leu Gln Gly Arg Asp Gly Leu Leu
 305 310 315 320

Thr Val Arg Lys Pro Leu Asp Phe Glu Ser Gln Arg Ser Tyr Ser Phe
 325 330 335

Arg Val Glu Ala Thr Asn Thr Leu Ile Asp Pro Ala Tyr Leu Arg Arg
 340 345 350

Gly Pro Phe Lys Asp Val Ala Ser Val Arg Val Ala Val Gln Asp Ala
 355 360 365

Pro Glu Pro Pro Ala Phe Thr Gln Ala Ala Tyr His Leu Thr Val Pro
 370 375 380

Glu Asn Lys Ala Pro Gly Thr Leu Val Gly Gln Ile Ser Ala Ala Asp
 385 390 395 400

Leu Asp Ser Pro Ala Ser Pro Ile Arg Tyr Ser Ile Leu Pro His Ser
 405 410 415

Asp Pro Glu Arg Cys Phe Ser Ile Gln Pro Glu Glu Gly Thr Ile His
 420 425 430

Thr Ala Ala Pro Leu Asp Arg Glu Ala Arg Ala Trp His Asn Leu Thr
 435 440 445

Val Leu Ala Thr Glu Leu Gly Trp Ser Trp Gly Pro Glu Arg Gly Trp
 450 455 460

Val Pro Leu Leu Val Ala Glu Trp Ser Ala Pro Ala Ala Pro Pro Gln
 465 470 475 480

Arg Ser Pro Val Gly Ser Ala Val Gly Ile Pro Gln Asp Ser Ser Ala
 485 490 495

Gln Ala Ser Arg Val Gln Val Ala Ile Gln Thr Leu Asp Glu Asn Asp
 500 505 510

09788051-021601

Asn Ala Pro Gln Leu Ala Glu Pro Tyr Asp Thr Phe Val Cys Asp Ser
515 520 525

Ala Ala Pro Gly Gln Leu Ile Gln Val Ile Arg Ala Leu Asp Arg Asp
530 535 540

Glu Val Gly Asn Ser Ser His Val Ser Phe Gln Gly Pro Leu Gly Pro
545 550 555 560

Asp Ala Asn Phe Thr Val Gln Asp Asn Arg Asp Leu Pro Ala Trp Phe
565 570 575

His Pro Leu Leu Met Ala Ser Ala Ser Ser Trp Leu His Trp Pro Pro
580 585 590

Ala Glu Arg Gly Asn Gln Pro Ala Ser Gln Gly Lys Ser Ser Ser Leu
595 600 605

Pro Cys Gly Arg Leu Pro Gly Ala Leu Pro Ser Cys Gln Leu Pro Leu
610 615 620

Gly Ile Pro Ala Leu Gly Ile Val Leu Cys Ala Ser
625 630 635

<210> 5
<211> 1911
<212> DNA
<213> Homo sapiens

<400> 5
atgtggggcc tgggtgaggct cctgctggcc tggctgggtg gctggggctg catggggcgt 60
ctggcagccc cagcccgggc ctgggcaggg tcccgggaac acccagggcc tgctctgctg 120
cggactcgaa ggagctgggt ctggaaccag ttctttgtca ttgaggaata tgctggtcca 180
gagcctgttc tcattggcaa gctgcactcg gatgttgacc ggggagaggg ccgcaccaag 240
tacctgttga ccggggaggg ggcaggcacc gtatttgtga ttgatgaggc cacaggcaat 300
attcatgtta ccaagagcct tgaccgggag gaaaaggcgc aatatgtgct actggcccaa 360
gccgtggacc gagcctcaa ccggcccctg gagcccccat cagagttcat catcaaaggg 420
caagacatca acgacaatcc acccattttt ccccttgggc cctaccatgc caccgtgccc 480
gagatgtcca atgtcgggac atcagtgatc caggtgactg ctcacgatgc tgatgacccc 540
agctatggga acagtgccaa gctggtgtac actgttcttg atggactgcc tttcttctct 600

gtggaccccc agactggagt ggtgcgtaga gccatcccca acatggaccg ggagacacag 660
gaggagttct tgggtggtgat ccaggccaag gacatgggcg gccacatggg ggggctgtca 720
ggcagcacta cgggtgactgt cacgctcagc gatgtcaacg acaaccccc caagttccca 780
cagagcctat accagttctc cgtgggtggag acagctggac ctggcacact ggtgggccgg 840
ctccggggcc aggacccaga cctggggggac aacgccctga tggcatacag catcctggat 900
ggggaggggt ctgaggcctt cagcatcagc acagacttgc agggtcgaga cgggctcctc 960
actgtccgca agcccctaga ctttgagagc cagcgtcct actccttcg tgtcgaggcc 1020
accaacacgc tcattgaccc agcctatctg cggcgagggc cttcaagga tgtggcctct 1080
gtgcggtggt cagtgcaga tgccccagag ccacctgcct tcaccaggc tgcctaccac 1140
ctgacagtgc ctgagaacaa ggccccgggg accctggtag gccagatctc cgcggctgac 1200
ctggactccc ctgccagccc aatcagatac tccatcctcc cccactcaga tccggagcgt 1260
tgcttctcta tccagcccga ggaaggcacc atccatacag cagcaccct ggatcgcgag 1320
gctcgcgcct ggcacaacct cactgtgctg gctacagagc tcggctggag ctgggggcca 1380
gaaaggggct ggggtacctt tctggttgct gagtggagt caccagcagc cccaccccag 1440
agaagccctg ttggaagcgc tgtgggaatc cccaagaca gttctgcaca ggcctcgcgc 1500
gtgcaagtgg ccatccagac cctggatgag aatgacaatg ctccccagct ggctgagccc 1560
tacgatactt ttgtgtgtga ctctgcagct cctggccagc tgattcaggt catccgggcc 1620
ctggacagag atgaagttgg caacagtagc catgtctcct ttcaaggtcc tctgggccct 1680
gatgccaaact ttactgtcca ggacaaccga gacctgcctg catggttcca tccattactc 1740
atggcctcag cctcatcctg gctccactgg cctccagctg agagagggaa ccagcctgcc 1800
tcccagggca agagctccag cctcccgtgt ggccgcctcc ctggagctct gccagctgt 1860
cagcttcccc tgggcatccc agccctgggc attgtcttgt gtgcttctg a 1911

<210> 6
<211> 16
<212> PRT
<213> Homo sapiens

<400> 6

Met Trp Gly Leu Val Arg Leu Leu Leu Ala Trp Leu Gly Gly Trp Gly
1 5 10 15

<210> 7

<211> 620
 <212> PRT
 <213> Homo sapiens

<400> 7

Cys	Met	Gly	Arg	Leu	Ala	Ala	Pro	Ala	Arg	Ala	Trp	Ala	Gly	Ser	Arg	1	5	10	15
Glu	His	Pro	Gly	Pro	Ala	Leu	Leu	Arg	Thr	Arg	Arg	Ser	Trp	Val	Trp	20	25	30	
Asn	Gln	Phe	Phe	Val	Ile	Glu	Glu	Tyr	Ala	Gly	Pro	Glu	Pro	Val	Leu	35	40	45	
Ile	Gly	Lys	Leu	His	Ser	Asp	Val	Asp	Arg	Gly	Glu	Gly	Arg	Thr	Lys	50	55	60	
Tyr	Leu	Leu	Thr	Gly	Glu	Gly	Ala	Gly	Thr	Val	Phe	Val	Ile	Asp	Glu	65	70	75	80
Ala	Thr	Gly	Asn	Ile	His	Val	Thr	Lys	Ser	Leu	Asp	Arg	Glu	Glu	Lys	85	90	95	
Ala	Gln	Tyr	Val	Leu	Leu	Ala	Gln	Ala	Val	Asp	Arg	Ala	Ser	Asn	Arg	100	105	110	
Pro	Leu	Glu	Pro	Pro	Ser	Glu	Phe	Ile	Ile	Lys	Gly	Gln	Asp	Ile	Asn	115	120	125	
Asp	Asn	Pro	Pro	Ile	Phe	Pro	Leu	Gly	Pro	Tyr	His	Ala	Thr	Val	Pro	130	135	140	
Glu	Met	Ser	Asn	Val	Gly	Thr	Ser	Val	Ile	Gln	Val	Thr	Ala	His	Asp	145	150	155	160
Ala	Asp	Asp	Pro	Ser	Tyr	Gly	Asn	Ser	Ala	Lys	Leu	Val	Tyr	Thr	Val	165	170	175	
Leu	Asp	Gly	Leu	Pro	Phe	Phe	Ser	Val	Asp	Pro	Gln	Thr	Gly	Val	Val	180	185	190	
Arg	Thr	Ala	Ile	Pro	Asn	Met	Asp	Arg	Glu	Thr	Gln	Glu	Glu	Phe	Leu	195	200	205	
Val	Val	Ile	Gln	Ala	Lys	Asp	Met	Gly	Gly	His	Met	Gly	Gly	Leu	Ser	210	215	220	
Gly	Ser	Thr	Thr	Val	Thr	Val	Thr	Leu	Ser	Asp	Val	Asn	Asp	Asn	Pro	225	230	235	240
Pro	Lys	Phe	Pro	Gln	Ser	Leu	Tyr	Gln	Phe	Ser	Val	Val	Glu	Thr	Ala	245	250	255	
Gly	Pro	Gly	Thr	Leu	Val	Gly	Arg	Leu	Arg	Ala	Gln	Asp	Pro	Asp	Leu	260	265	270	

09788051-021601

Gly	Asp	Asn	Ala	Leu	Met	Ala	Tyr	Ser	Ile	Leu	Asp	Gly	Glu	Gly	Ser	275	280	285
Glu	Ala	Phe	Ser	Ile	Ser	Thr	Asp	Leu	Gln	Gly	Arg	Asp	Gly	Leu	Leu	290	295	300
Thr	Val	Arg	Lys	Pro	Leu	Asp	Phe	Glu	Ser	Gln	Arg	Ser	Tyr	Ser	Phe	305	310	315
Arg	Val	Glu	Ala	Thr	Asn	Thr	Leu	Ile	Asp	Pro	Ala	Tyr	Leu	Arg	Arg	325	330	335
Gly	Pro	Phe	Lys	Asp	Val	Ala	Ser	Val	Arg	Val	Ala	Val	Gln	Asp	Ala	340	345	350
Pro	Glu	Pro	Pro	Ala	Phe	Thr	Gln	Ala	Ala	Tyr	His	Leu	Thr	Val	Pro	355	360	365
Glu	Asn	Lys	Ala	Pro	Gly	Thr	Leu	Val	Gly	Gln	Ile	Ser	Ala	Ala	Asp	370	375	380
Leu	Asp	Ser	Pro	Ala	Ser	Pro	Ile	Arg	Tyr	Ser	Ile	Leu	Pro	His	Ser	385	390	395
Asp	Pro	Glu	Arg	Cys	Phe	Ser	Ile	Gln	Pro	Glu	Glu	Gly	Thr	Ile	His	405	410	415
Thr	Ala	Ala	Pro	Leu	Asp	Arg	Glu	Ala	Arg	Ala	Trp	His	Asn	Leu	Thr	420	425	430
Val	Leu	Ala	Thr	Glu	Leu	Gly	Trp	Ser	Trp	Gly	Pro	Glu	Arg	Gly	Trp	435	440	445
Val	Pro	Leu	Leu	Val	Ala	Glu	Trp	Ser	Ala	Pro	Ala	Ala	Pro	Pro	Gln	450	455	460
Arg	Ser	Pro	Val	Gly	Ser	Ala	Val	Gly	Ile	Pro	Gln	Asp	Ser	Ser	Ala	465	470	475
Gln	Ala	Ser	Arg	Val	Gln	Val	Ala	Ile	Gln	Thr	Leu	Asp	Glu	Asn	Asp	485	490	495
Asn	Ala	Pro	Gln	Leu	Ala	Glu	Pro	Tyr	Asp	Thr	Phe	Val	Cys	Asp	Ser	500	505	510
Ala	Ala	Pro	Gly	Gln	Leu	Ile	Gln	Val	Ile	Arg	Ala	Leu	Asp	Arg	Asp	515	520	525
Glu	Val	Gly	Asn	Ser	Ser	His	Val	Ser	Phe	Gln	Gly	Pro	Leu	Gly	Pro	530	535	540
Asp	Ala	Asn	Phe	Thr	Val	Gln	Asp	Asn	Arg	Asp	Leu	Pro	Ala	Trp	Phe	545	550	555
His	Pro	Leu	Leu	Met	Ala	Ser	Ala	Ser	Ser	Trp	Leu	His	Trp	Pro	Pro	565	570	575

Ala Glu Arg Gly Asn Gln Pro Ala Ser Gln Gly Lys Ser Ser Ser Leu
580 585 590

Pro Cys Gly Arg Leu Pro Gly Ala Leu Pro Ser Cys Gln Leu Pro Leu
595 600 605

Gly Ile Pro Ala Leu Gly Ile Val Leu Cys Ala Ser
610 615 620

<210> 8
<211> 48
<212> PRT
<213> Homo sapiens

<400> 8

Pro Ser Glu Phe Ile Ile Lys Gly Gln Asp Ile Asn Asp Asn Pro Pro
1 5 10 15

Ile Phe Pro Leu Gly Pro Tyr His Ala Thr Val Pro Glu Met Ser Asn
20 25 30

Val Gly Thr Ser Val Ile Gln Val Thr Ala His Asp Ala Asp Asp Pro
35 40 45

<210> 9
<211> 48
<212> PRT
<213> Homo sapiens

<400> 9

Ser Thr Thr Val Thr Val Thr Leu Ser Asp Val Asn Asp Asn Pro Pro
1 5 10 15

Lys Phe Pro Gln Ser Leu Tyr Gln Phe Ser Val Val Glu Thr Ala Gly
20 25 30

Pro Gly Thr Leu Val Gly Arg Leu Arg Ala Gln Asp Pro Asp Leu Gly
35 40 45

<210> 10
<211> 33
<212> PRT
<213> Homo sapiens

<400> 10

Leu Leu Arg Thr Arg Arg Ser Trp Val Trp Asn Gln Phe Phe Val Ile
1 5 10 15

Glu Glu Tyr Ala Gly Pro Glu Pro Val Leu Ile Gly Lys Leu His Ser
20 25 30

Asp

<210> 11
 <211> 18
 <212> PRT
 <213> Homo sapiens

<400> 11

Ser Gly Ser Thr Thr Val Thr Val Thr Leu Ser Asp Val Asn Asp Asn
 1 5 10 15

Pro Pro

<210> 12
 <211> 18
 <212> PRT
 <213> Homo sapiens

<400> 12

Ser Gly Ser Thr Thr Val Thr Val Thr Leu Ser Asp Val Asn Asp Asn
 1 5 10 15

Pro Pro

<210> 13
 <211> 48
 <212> PRT
 <213> Homo sapiens

<400> 13

Asp Val Ala Ser Val Arg Val Ala Val Gln Asp Ala Pro Glu Pro Pro
 1 5 10 15

Ala Phe Thr Gln Ala Ala Tyr His Leu Thr Val Pro Glu Asn Lys Ala
 20 25 30

Pro Gly Thr Leu Val Gly Gln Ile Ser Ala Ala Asp Leu Asp Ser Pro
 35 40 45

<210> 14
 <211> 16
 <212> PRT
 <213> Homo sapiens

<400> 14

Val Gly Thr Ser Val Ile Gln Val Thr Ala His Asp Ala Asp Asp Pro
 1 5 10 15

<210> 15
 <211> 193
 <212> PRT
 <213> Homo sapiens

<400> 15

Ser Leu Tyr Gln Phe Ser Val Val Glu Thr Ala Gly Pro Gly Thr Leu
1 5 10 15

Val Gly Arg Leu Arg Ala Gln Asp Pro Asp Leu Gly Asp Asn Ala Leu
20 25 30

Met Ala Tyr Ser Ile Leu Asp Gly Glu Gly Ser Glu Ala Phe Ser Ile
35 40 45

Ser Thr Asp Leu Gln Gly Arg Asp Gly Leu Leu Thr Val Arg Lys Pro
50 55 60

Leu Asp Phe Glu Ser Gln Arg Ser Tyr Ser Phe Arg Val Glu Ala Thr
65 70 75 80

Asn Thr Leu Ile Asp Pro Ala Tyr Leu Arg Arg Gly Pro Phe Lys Asp
85 90 95

Val Ala Ser Val Arg Val Ala Val Gln Asp Ala Pro Glu Pro Pro Ala
100 105 110

Phe Thr Gln Ala Ala Tyr His Leu Thr Val Pro Glu Asn Lys Ala Pro
115 120 125

Gly Thr Leu Val Gly Gln Ile Ser Ala Ala Asp Leu Asp Ser Pro Ala
130 135 140

Ser Pro Ile Arg Tyr Ser Ile Leu Pro His Ser Asp Pro Glu Arg Cys
145 150 155 160

Phe Ser Ile Gln Pro Glu Glu Gly Thr Ile His Thr Ala Ala Pro Leu
165 170 175

Asp Arg Glu Ala Arg Ala Trp His Asn Leu Thr Val Leu Ala Thr Glu
180 185 190

Leu

<210> 16

<211> 419

<212> PRT

<213> Homo sapiens

<400> 16

Gly Gln Val Leu Gln Arg Ser Lys Arg Gly Trp Val Trp Asn Gln Phe
1 5 10 15

Phe Val Ile Glu Glu Tyr Thr Gly Pro Asp Pro Val Leu Val Gly Arg
20 25 30

Leu His Ser Asp Ile Asp Ser Gly Asp Gly Asn Ile Lys Tyr Ile Leu
35 40 45

09788051-021601

09788051.021601

Ser	Gly	Glu	Gly	Ala	Gly	Thr	Ile	Phe	Val	Ile	Asp	Asp	Lys	Ser	Gly	50	55	60
Asn	Ile	His	Ala	Thr	Lys	Thr	Leu	Asp	Arg	Glu	Glu	Arg	Ala	Gln	Tyr	65	70	75
Thr	Leu	Met	Ala	Gln	Ala	Val	Asp	Arg	Asp	Thr	Asn	Arg	Pro	Leu	Glu	85	90	95
Pro	Pro	Ser	Glu	Phe	Ile	Val	Lys	Val	Gln	Asp	Ile	Asn	Asp	Asn	Pro	100	105	110
Pro	Glu	Phe	Leu	His	Glu	Thr	Tyr	His	Ala	Asn	Val	Pro	Glu	Arg	Ser	115	120	125
Asn	Val	Gly	Thr	Ser	Val	Ile	Gln	Val	Thr	Ala	Ser	Asp	Ala	Asp	Asp	130	135	140
Pro	Thr	Tyr	Gly	Asn	Ser	Ala	Lys	Leu	Val	Tyr	Ser	Ile	Leu	Glu	Gly	145	150	155
Gln	Pro	Tyr	Phe	Ser	Val	Glu	Ala	Gln	Thr	Gly	Ile	Ile	Arg	Thr	Ala	165	170	175
Leu	Pro	Asn	Met	Asp	Arg	Glu	Ala	Lys	Glu	Glu	Tyr	His	Val	Val	Ile	180	185	190
Gln	Ala	Lys	Asp	Met	Gly	Gly	His	Met	Gly	Gly	Leu	Ser	Gly	Thr	Thr	195	200	205
Lys	Val	Thr	Ile	Thr	Leu	Thr	Asp	Val	Asn	Asp	Asn	Pro	Pro	Lys	Phe	210	215	220
Pro	Gln	Ser	Val	Tyr	Gln	Ile	Ser	Val	Ser	Glu	Ala	Ala	Val	Pro	Gly	225	230	235
Glu	Glu	Val	Gly	Arg	Val	Lys	Ala	Lys	Asp	Pro	Asp	Ile	Gly	Glu	Asn	245	250	255
Gly	Leu	Val	Thr	Tyr	Asn	Ile	Val	Asp	Gly	Asp	Gly	Met	Glu	Ser	Phe	260	265	270
Glu	Ile	Thr	Thr	Asp	Tyr	Glu	Thr	Gln	Glu	Gly	Val	Ile	Lys	Leu	Lys	275	280	285
Lys	Pro	Val	Asp	Phe	Glu	Thr	Lys	Arg	Ala	Tyr	Ser	Leu	Lys	Val	Glu	290	295	300
Ala	Ala	Asn	Val	His	Ile	Asp	Pro	Lys	Phe	Ile	Ser	Asn	Gly	Pro	Phe	305	310	315
Lys	Asp	Thr	Val	Thr	Val	Lys	Ile	Ala	Val	Glu	Asp	Ala	Asp	Glu	Pro	325	330	335
Pro	Met	Phe	Leu	Ala	Pro	Ser	Tyr	Ile	His	Glu	Val	Gln	Glu	Asn	Ala	340	345	350

Ala Ala Gly Thr Val Val Gly Arg Val His Ala Lys Asp Pro Asp Ala
355 360 365

Ala Asn Ser Pro Ile Arg Tyr Ser Ile Asp Arg His Thr Asp Leu Asp
370 375 380

Arg Phe Phe Thr Ile Asn Pro Glu Asp Gly Phe Ile Lys Thr Thr Lys
385 390 395 400

Pro Leu Asp Arg Glu Glu Thr Ala Trp Leu Asn Ile Thr Val Phe Ala
405 410 415

Ala Glu Ile

<210> 17

<211> 419

<212> PRT

<213> Homo sapiens

<400> 17

Gly Gln Val Leu Gln Arg Ser Lys Arg Gly Trp Val Trp Asn Gln Phe
1 5 10 15

Phe Val Ile Glu Glu Tyr Thr Gly Pro Asp Pro Val Leu Val Gly Arg
20 25 30

Leu His Ser Asp Ile Asp Ser Gly Asp Gly Asn Ile Lys Tyr Ile Leu
35 40 45

Ser Gly Glu Gly Ala Gly Thr Ile Phe Val Ile Asp Asp Lys Ser Gly
50 55 60

Asn Ile His Ala Thr Lys Thr Leu Asp Arg Glu Glu Arg Ala Gln Tyr
65 70 75 80

Thr Leu Met Ala Gln Ala Val Asp Arg Asp Thr Asn Arg Pro Leu Glu
85 90 95

Pro Pro Ser Glu Phe Ile Val Lys Val Gln Asp Ile Asn Asp Asn Pro
100 105 110

Pro Glu Phe Leu His Glu Thr Tyr His Ala Asn Val Pro Glu Arg Ser
115 120 125

Asn Val Gly Thr Ser Val Ile Gln Val Thr Ala Ser Asp Ala Asp Asp
130 135 140

Pro Thr Tyr Gly Asn Ser Ala Lys Leu Val Tyr Ser Ile Leu Glu Gly
145 150 155 160

Gln Pro Tyr Phe Ser Val Glu Ala Gln Thr Gly Ile Ile Arg Thr Ala
165 170 175

Leu Pro Asn Met Asp Arg Glu Ala Lys Glu Glu Tyr His Val Val Ile
180 185 190

09783051-021601

Gln	Ala	Lys	Asp	Met	Gly	Gly	His	Met	Gly	Gly	Leu	Ser	Gly	Thr	Thr	
	195						200					205				
Lys	Val	Thr	Ile	Thr	Leu	Thr	Asp	Val	Asn	Asp	Asn	Pro	Pro	Lys	Phe	
	210					215					220					
Pro	Gln	Ser	Val	Tyr	Gln	Ile	Ser	Val	Ser	Glu	Ala	Ala	Val	Pro	Gly	
225					230					235					240	
Glu	Glu	Val	Gly	Arg	Val	Lys	Ala	Lys	Asp	Pro	Asp	Ile	Gly	Glu	Asn	
				245					250					255		
Gly	Leu	Val	Thr	Tyr	Asn	Ile	Val	Asp	Gly	Asp	Gly	Met	Glu	Ser	Phe	
			260					265						270		
Glu	Ile	Thr	Thr	Asp	Tyr	Glu	Thr	Gln	Glu	Gly	Val	Ile	Lys	Leu	Lys	
		275					280						285			
Lys	Pro	Val	Asp	Phe	Glu	Thr	Lys	Arg	Ala	Tyr	Ser	Leu	Lys	Val	Glu	
	290						295				300					
Ala	Ala	Asn	Val	His	Ile	Asp	Pro	Lys	Phe	Ile	Ser	Asn	Gly	Pro	Phe	
305					310					315					320	
Lys	Asp	Thr	Val	Thr	Val	Lys	Ile	Ala	Val	Glu	Asp	Ala	Asp	Glu	Pro	
				325					330					335		
Pro	Met	Phe	Leu	Ala	Pro	Ser	Tyr	Ile	His	Glu	Val	Gln	Glu	Asn	Ala	
			340					345						350		
Ala	Ala	Gly	Thr	Val	Val	Gly	Arg	Val	His	Ala	Lys	Asp	Pro	Asp	Ala	
		355					360					365				
Ala	Asn	Ser	Pro	Ile	Arg	Tyr	Ser	Ile	Asp	Arg	His	Thr	Asp	Leu	Asp	
	370					375					380					
Arg	Phe	Phe	Thr	Ile	Asn	Pro	Glu	Asp	Gly	Phe	Ile	Lys	Thr	Thr	Lys	
385					390					395					400	
Pro	Leu	Asp	Arg	Glu	Glu	Thr	Ala	Trp	Leu	Asn	Ile	Thr	Val	Phe	Ala	
				405					410					415		
Ala	Glu	Ile														